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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,367	12/04/2001	Yuko Fujihira	SON-2296	9778
23353	7590	02/02/2004	EXAMINER	
RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036			MCCLENDON, SANZA L	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/000,367

Applicant(s)

FUJIHIRA ET AL.

Examiner

Sanza L McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-2, 4-26, 28-38, and 40-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5, 7, 38 and 40-65 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 9, 15, 25, 26, 28, 31, 34 and 36 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 8, 10-14, 16-24, 29, 30, 32, 33, 35 and 37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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DETAILED ACTION

*Response to Amendment*

1. In response to the Amendment received on October 15, 2003, the examiner has carefully considered the amendments. The examiner acknowledges the cancellation of claims 3, 27, and 39.

*Response to Arguments*

2. Applicant's arguments with respect to claims 1-2, 4-26, 28-38 and 40-65 have been considered but are moot in view of the new ground(s) of rejection.

*Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-2, 9, 15, 25-26, 28, 31, 32, 34, and 36 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for biodegradable aliphatic polyester resins, such as polylactic acid (see page 3, lines 22-26), does not reasonably provide enablement for every other biodegradable resins, such as polyethylene, polypropylene, polyvinyl alcohol, starch, rubbers, carbohydrates, and the like. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/use the invention commensurate in scope with these claims. Applicant discloses the use of biodegradable resins within said claims, however applicant per

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applicant's specification teaches the use of only aliphatic polyesters as stated on page 3, lines 22-26.

*Allowable Subject Matter*

5. Claims 4, 6, 8, 10-14, 16-24, 29-30, 32-33, 35, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach the method according to claim 2, wherein the irradiation step is a microwave step from 1 to 10 minutes, the biodegradable resin is an aliphatic polyester, such as polylactic acid comprising a carbodiimide additive for suppressing hydrolysis. Nor wherein said biodegradable resin comprises mica either natural or synthetic, wherein said natural mica is an agglomerate comprising acrylic, epoxy or urethane resin binders having a diameter from 15 to 140 microns.

7. Claims 5, 7, 38, and 40-65 are allowed.

8. The following is an examiner's statement of reasons for allowance: The primary reasons for allowance is the prior art fails to teach improvement in the elastic modulus of biodegradable resin materials using microwave energy, wherein the material is comprised mainly of a biodegradable resin that is an aliphatic polyester resin, wherein said composition comprises as a crystal nucleating agent that is synthetic mica, and the method comprises injecting said biodegradable resin material into a mold to form an injection molded product and irradiating said molded product with microwaves. The prior art fails to teach a housing material comprising a biodegradable resin composition, which comprises a biodegradable resin and natural mica. The prior art fails to teach a housing material comprising a biodegradable resin composition, which comprises an aliphatic polyester resin and synthetic mica, as an organic nucleating agent. The prior art fails to teach a method for producing a biodegradable resin as defined above comprising kneading together at a temperature range from 150 to 200 °C the aliphatic polyester resin and synthetic mica in the amounts from 0.5 to 20.0 wt%.

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The prior art does not explicitly teach and/or fairly suggest a method of improving the elastic modulus of a biodegradable resin comprising synthetic mica and an aliphatic polyester resin by comprising a step of allowing said resin composition to stand form 30 to 180 seconds while heating at 80 to 130 OC. Or comprising the steps of injecting said resin composition into a mold to form an injection-molded product and heating said molded product at 80 to 130 OC for 30 to 180 seconds. Nor comprising the step of injecting into a mold whose inner surface is heated by radio frequency induction heating the biodegradable resin composition to form an injection molded product and heating said product in the mold at 80 to 130 OC for 30 to 180 seconds.

The prior art fails to teach a biodegradable resin composition comprising an aliphatic polyester resin, an organic nucleating agent and natural mica. Nor does the prior art teach a housing material comprising the previously mentioned biodegradable composition. The prior art does not explicitly teach and/or fairly suggest a method of improving the elastic modulus of a biodegradable resin comprising an organic nucleating agent, natural mica and an aliphatic polyester resin by comprising a step of allowing said resin composition to stand form 30 to 180 seconds while heating at 80 to 130 OC. Or comprising the steps of injecting said resin composition into a mold to form an injection-molded product and heating said molded product at 80 to 130 OC for 30 to 180 seconds. Nor comprising the step of injecting into a mold whose inner surface is heated by radio frequency induction heating the biodegradable resin composition to form an injection molded product and heating said product in the mold at 80 to 130 OC for 30 to 180 seconds.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L McClendon whose telephone number is (703) 305-0505. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0657.

Sanza L McClendon

Examiner

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SMc

January 23, 2004



James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1701